South Dakota
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To John | From
Co. Boehmke | Co. Ken Parr
Dept. | Phone #
Fax # 6P-2100 | Fax #

Dear Ken:

We have reviewed the Draft Environmental Impact Statement, Contract Negotiation and Water Management, Angostura Unit, South Dakota. As a result of that review we have several comments to make relative to the document

As a cooperating agency, this department appreciates the difficulties in attempting to balance the impacts of negotiating a long-term water service contract and adjusting the water management plan to meet the needs of other important interests which have surfaced since the original contract went into effect.

The plan identifies and presents four alternatives that are as follows;
(1) The No Action Alternative
(2) The Re-establishment of Natural Flows Below the Dam Alternative
(3) The Improved Efficiencies Alternative
(4) The Reservoir Recreation and Fisheries Alternative

The plan does not identify a preferred alternative and states that one will be selected after the public review and comment period.

1 [We cannot support the No Action Alternative. Renewing the existing water service contract with minor modifications would simply continue the existing situation.] Advancements in technologies and changes in environmental understanding, recreational use and passage of Federal statutes over the past 62 years have rendered the current project obsolete. Under this alternative irrigation practices and demands would not change, and other important project uses would continue to be secondary to irrigation.

Office of Secretary: 605/773-3387 Wildlife Division: 605/773-3381 Parks and Recreation Division: 605/773-3391 FAX: 605/773-6245
TDD: 605/773-3485

1. Noted. As stated on p. 2 of the EIS, however, we note that under the 1939 Reclamation Project Act, Reclamation is required to negotiate a long-term water service contract with the Angostura Irrigation District. Most comments on this EIS from recreationists supported the No Action Alternative.

The Re-establishment of Natural Flows Alternative would re-establish natural flows as
2 nearly as possible in the river downstream of the dam.[The only way that natural flows can truly be established would be to completely remove the dam. This alternative would allow inflows to pass through the reservoir until the spillway crest elevation was reached thus diminishing recreation, the fishery and irrigation. Therefore we cannot support this alternative.]

The Reservoir Recreation and Fisheries Alternative would make these resources the priority for which the project was managed. It would, except in years of extreme drought, eliminate low reservoir levels but may reduce or eliminate irrigation altogether.
The Bureau of Reclamation estimates that recreation use on the reservoir generates and estimated $7.8 million dollars in annual benefits while irrigated agricultural use generates approximately $525,000 in annual benefits to the nation under the current water management plan. Based on this economic analysis it would appear the Reservoir Recreation and Fisheries use has become and should be the highest priority use of the reservoir. However simply changing priorities for water management to the Reservoir Recreation and Fisheries alternative can potentially increase the benefits for recreation by only an estimated $104,000 annually. At the same time it could have adverse impacts to
3 irrigation, in-stream flows, fish, and wildlife downstream.[Therefore we do not support this alternative.]

4 [It is our opinion that the Improved Efficiency Alternative provides the greatest opportunity to benefit the greatest number of project purposes.]Provided efficiencies are obtained in both the water delivery system and on farm practices the savings in water are projected to be approximately 8000 acre feet. This would be achieved by lining canals and laterals, putting laterals in pipe, improving measuring devices, leveling fields, irrigating by gated pipe or sprinkler, installing automated turnouts, providing education, instituting BMP's and building a re-regulating reservoir. The water saved could be used for recreation, fisheries, wildlife and for in-stream flows.

By using the appendices included with the Draft EIS we have developed the following plan for your consideration.

We reviewed the inflows into Angostura Reservoir from 1953 through 1997. We found using the arithmetic mean the six months of highest inflow to be March, April, May, June, July and August. At the same time, using the arithmetic mean again, the six months of lowest monthly discharge to the river were September, October, November, December, January and February. Assuming the average annual savings with the
5 Improved Efficiency Alternative is 8000 acre feet of water.[We suggest the first year the 8000 acre feet of water should be kept in the reservoir during the months of highest inflow (which corresponds with the high use recreation season), and 4000 acre feet of water should be released to the river during the lowest six months of discharge. The second year the 8000 acre feet saved under this alternative should again be saved in the reservoir during the six months of high inflow and 4000 acre feet should be released over the six months of low discharge. Given average years by the third year 8000 acre feet can be saved and 8000 acre feet can be released to the river because of the 4000 acre feet

2. Even removing Angostura Dam wouldn't completely reestablish natural flows in the river because of the many stock dams upstream. Flows would spill in this alternative only <u>after</u> the water level in the reservoir reached the spillway crest, not before, thus retaining the reservoir water level at elevation 3157.2 feet. Noted.

3. Noted. The economic analysis for the EIS estimated that annual recreation benefits ($7,179,000) for the Reservoir Recreation and Fisheries Alternative would be about $104,000 greater than the benefits for No Action ($7,075,000). Benefits were based on reservoir water elevations during the recreation season. In the Reservoir Recreation and Fisheries Alternative, operation of the reservoir could provide water for irrigation under most conditions (annual average releases to the District would range from 53.5-45.3 cfs for 82-93% of the period—see Table 4.13 in the EIS). Releases to the Cheyenne River fisheries and wildlife downstream would be the same as for No Action.

4. Noted. One of the effects of this alternative, however, would be the reduction of 5-10 cfs of annual average return flows.

5. Noted.

carried over from each of the previous two years. This scenario is based on average years and can be followed each ensuing year with adjustments for such intangibles as evaporation, inflow during droughts and years of exceptionally high water yield.]

6 [This plan will not have any negative impacts to irrigation, will potentially generate a $310,000 to $382,000 increase in benefits to recreation and will provide in-stream flow benefits to the Cheyenne River.] It will significantly improve in-stream flow benefits in that seven-mile reach of the river from the dam to where the first return flows from the irrigation project enter the river downstream. It will also aid in the over-wintering of fish in the Cheyenne River all the way to its confluence with the Missouri River. Additionally, we do not foresee adverse impacts to any endangered species, or other plant or animal species or their habitat as a result of implementing this plan.

Thank you for the opportunity to comment on the Draft EIS.

Sincerely

John C. Kirk, Chief, Environmental Review and Management

6. Noted.